

CLAIMS:

1. A composition comprising an amount of an immunologically active protein comprising SEQ ID NO: 11, SEQ ID NO:15, at least 10 amino acids of SEQ ID NO:11, or at least 10 amino acids of SEQ ID NO:15, and a pharmaceutically acceptable carrier, which amount is effective to immunize a susceptible mammal against infection caused by *Borrelia burgdorferi*.
2. The composition of claim 1, wherein the composition is effective as a vaccine.
3. The composition of claim 1, which further comprises an effective amount of an immune stimulating agent.
4. A composition comprising an amount of an immunologically active protein comprising SEQ ID NO: 11, SEQ ID NO:15, at least 10 amino acids of SEQ ID NO:11, or at least 10 amino acids of SEQ ID NO:15, and a pharmaceutically acceptable carrier, which amount is effective to stimulate the formation of antibodies against *Borrelia burgdorferi* in a person.
5. The composition of claim 4, which further comprises an effective amount of an immune stimulating agent.